

Geographical differences in Fiery Topaz *Topaza pyra*

Robin Restall

Conservationists are paying increasing attention to subspecies in their quest to prevent extinctions, but field guides are only starting to follow suit. This short article considers a recently described subspecies of a glittering hummingbird, to encourage birders and field researchers into defining the taxon's range.



Above, left to right: Fiery Topaz *Topaza pyra amarundi* adult male and female, Fiery Topaz *Topaza p. pyra* adult male, adult female and juvenile (Robin Restall). Sharp-eyed readers may note that bill size and shape differs between the illustrations. The three *pyra* show the range of bill sizes found on the five specimens of this subspecies from Venezuela (in the Phelps Collection, Caracas). In contrast, the two specimens of *amarundi* from Peru in the Louisiana State University collection are too small a sample to know whether similar variation exists with this form, or whether the thicker bill illustrated is a characteristic of the race.

Left: Adult male Crimson Topaz *Topaza pella*, Iracema Falls, near Presidente Figueiredo, Amazonas, Brazil, April 2008 (Joseph Tobias/www.neomorphus.com). This species is closely related to and sometimes treated as conspecific with Fiery Topaz *T. pyra*.

As the rise and rise of Red Data Books and the IUCN Red List have demonstrated over the past two decades, one important weapon in the conservationist's armoury is the existence (or decline or impending extirpation) of rare species. Increasingly, however, this weapon is being refined in our collective and ongoing war against extinction. Greater value is being placed on more narrowly defined taxonomic entities. What was once dismissed as 'merely a localised subspecies' is now recognised as an evolutionarily distinct entity whose small range may place it under threat of extinction. As such, this creature is becoming a new and vital tool for conservation. Throughout the 20th century, most birders have been content to identify birds to the level of species, and most field guides have been designed to an equivalent level of sophistication. Yet in this new century, I guess coaxed along by evolving conservation attention, field guides are becoming increasingly aware of the need to name, highlight and identify geographic variations.

Fiery Topaz *Topaza pyra* is a beautiful hummingbird of northern South America. This scarce species is patchily and locally distributed, usually only occurring in sandy-soil forests along the margins of blackwater streams and palm swamps. Fiery Topaz was considered monotypic until the sharp-eyed Da-Shih Hu, on a visit to Ecuador, noticed that the birds he was watching had black tibial feathers rather than the white ones that he had been expecting to see. Hu and colleagues subsequently described the form as a subspecies, *T. p. amarundi*².

Hu's discovery reveals that this topaz is almost certainly more widespread than previously thought, occurring in suitable habitat from southern Colombia, through eastern Ecuador and across Peruvian and Brazilian Amazonia to Amazonas state in Venezuela^{1,3-5}. The type specimen was described from Venezuela and Hu's new subspecies from Ecuador, the two extremes of the species's range. But we remain entirely unclear where one subspecies stops and the other starts, information that is essential for the modern-day conservationist.

Hu's paper gives a detailed description of Fiery Topaz, but does not illustrate it. I have thus taken the liberty of doing so here as part of my preparations for the second edition of *Birds of Northern South America*³—and to assist both birders and conservationists.

The key difference between the two subspecies, and one applicable regardless of sex, is of course the tibia colour. As Hu *et al.* note, *pyra* has white tibial feathers with just a touch of black at the rear, whilst in *amarundi* they are black with tiny white tips. An odd footnote is that black tibial feathers are mentioned by Hilty & Brown¹ for individuals in east Vaupés, southern Colombia. Unfortunately, the accompanying illustration clearly depicts an adult male with white tibial tufts.

On the basis of the museum specimens I examined, females appear to display different tones to the undertail-coverts, turquoise-green in *amarundi* rather than the turquoise-blue of *pyra*. However, I feel that the difference in the lustre of the males in my illustration more likely reflects individual variation and/or an artefact of the light than a tangible and consistent plumage difference—but perhaps birders could investigate further in the field.

ACKNOWLEDGMENTS

To prepare the plate, I used specimens from collections at the Phelps Foundation in Caracas, Venezuela, and the Louisiana State University Zoological Museum. My most sincere thanks to Steve Cardiff at the latter institution for superb photographs of specimens of *Topaza pyra amarundi*. Thanks to Miguel Lention for assistance with details of specimens in the Phelps Ornithological Collection. Many thanks to Mariela D'Esquivan for constructive comments on a draft of this article.

REFERENCES

1. Hilty, S. L. & Brown, W. L. (1986) *A guide to the birds of Colombia*. Princeton, NJ: Princeton University Press.
2. Hu, D.-S., Joseph, L. & Agro, D. (2000) Distribution, variation and taxonomy of *Topaza* hummingbirds (Aves: Trochilidae). *Orn. Neotrop.* 11: 123–142.
3. Restall, R., Rodner, C. & Lentino, M. (2006) *Birds of northern South America*. London, UK: Christopher Helm.
4. Ridgely, R. S. & Greenfield, P. J. (2001) *The birds of Ecuador*. Ithaca, NY: Cornell University Press.
5. Schulenberg, T. S., Stotz, D. F., Lane, D. F., O'Neill, J. P. & Parker, T. A. (2007) *Birds of Peru*. Princeton, NJ: Princeton University Press.

ROBIN RESTALL

Phelps Institute of Ornithological Studies, Caracas, Venezuela. E-mail: robinrestall@gmail.com